

4.13 LINE ENTITY (TYPE 110, FORMS 1-2)‡

Line Entity (Type 110, Forms 1-2)‡

‡These forms of the Line Entity have not been tested. See Section 1.9.

Form 1: A semi-bounded line is a line bounded on one end and unbounded on the other end. It is defined by a start point (P1) and an arbitrary point (P2) through which the line passes and continues without bound.

Form 2: An unbounded line is an infinite line. It is defined by two points (P1 and P2) through which the line passes and continues without bound in both directions.

The arbitrary points shall be chosen to be within the extent of their definition space (*i.e.*, drawing or model space). Points P1 and P2 shall be used (*i.e.*, not infinity) when determining Approximate Maximum Coordinate Value (Global field 20).

Form	Description	Default parameterization
1	Semi-Bounded Line	$C(t) = P_1 + t(P_2 - P_1)$ for $0 \leq t < \infty$
2	Unbounded Line	$C(t) = P_1 + t(P_2 - P_1)$ for $-\infty < t < \infty$

Requirements: Forms 1 and 2 shall specify 06 for the Entity Use Flag when semi-bounded and unbounded lines are construction geometry. Forms 1 and 2 shall specify 01 for the Entity Use Flag when they are referenced by a Drawing Entity (Type 404). Forms 1 and 2 shall specify 02 for the Entity Use Flag when they are used as part of a definition entity such as the Subfigure Definition (Type 308). ECO705

Line font patterns start at P1 and continue toward P2. For form 2, the line font pattern shall repeat in the opposite direction from P1, by placing the end of the pattern at P1, with no perceptable break.

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Directory Entry

Number and Name	Value
(1) Entity Type Number	#
(3) Structure	< <i>n.a.</i> >
(4) Line Font Pattern	#, \Rightarrow
(5) Level	#, \Rightarrow
(6) View	0, \Rightarrow
(7) Transformation Matrix	0, \Rightarrow
(8) Label Display Assoc.	0, \Rightarrow
(9a) Blank Status	??
(9b) Subord. Ent. Switch	??
(9c) Entity Use Flag	??
(9d) Hierarchy	**
(12) Line Weight Number	#
(13) Color Number	#, \Rightarrow
(15) Form Number	1-2

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Semi-bounded Line Entity (Type 110, Form 1)

Parameter Data

<u>Index</u>	<u>Name</u>	<u>Type</u>	<u>Description</u>
1	X1	Real	Start point $P1X$
2	Y1	Real	Start point $P1Y$
3	Z1	Real	Start point $P1Z$
4	X2	Real	Arbitrary point $P2X$
5	Y2	Real	Arbitrary point $P2Y$
6	Z2	Real	Arbitrary point $P2Z$

Additional pointers as required (see Section 2.2.4.5.2).

Unbounded Line Entity (Type 110, Form 2)

Parameter Data

<u>Index</u>	<u>Name</u>	<u>Type</u>	<u>Description</u>
1	X1	Real	Arbitrary point $P1X$
2	Y1	Real	Arbitrary point $P1Y$
3	Z1	Real	Arbitrary point $P1Z$
4	X2	Real	Arbitrary point $P2X$
5	Y2	Real	Arbitrary point $P2Y$
6	Z2	Real	Arbitrary point $P2Z$

Additional pointers as required (see Section 2.2.4.5.2).